

Organized and funded by

Coalition  
Clean Baltic



*Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.*

# CCB & EC expert workshop 'Natural river processes as a base for river - related protected areas and river restoration' 20-22.04.2023, Poland

## SUMMARY REPORT

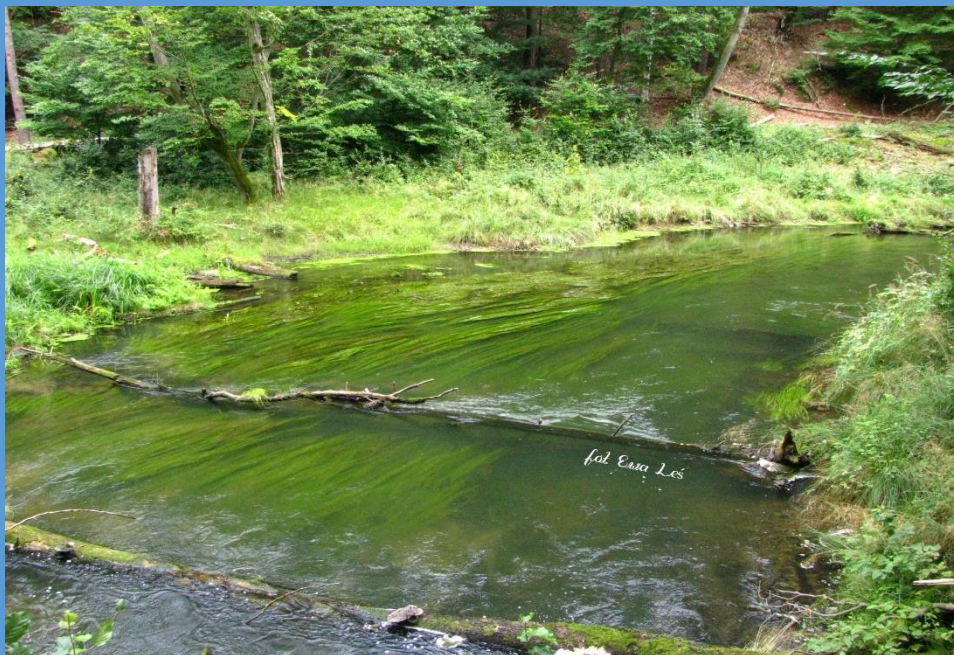
AUTHORS: onsite participants of the workshop, including lecturers

Ewa Leś (ed. & lead), Przemysław Ogiński, Andrea Nardini, Tobias Schaefer,  
Przemysław Nawrocki, Marina Piria, Mattias Sundqvist, Elin Götzmann,

Nancy Wolf, Kaja Lotman, Paweł Pawlaczyk, Lauma Vizule-Kahovska,

Zanda Segliņa, Aleksandra Gancarczyk, Szymon Śródecki, Jarosław Gancarczyk,  
Sylwia Gawrońska, Tomasz Kuczyński, Marta Klimkiewicz, Aleksandra Góralczyk,  
Agata Dyczko, Erik Tornblom, Marten Gustafsson,

Wojciech Żydyk, Valerie Kendall



## INTRODUCTION

One of the EU Biodiversity Strategy targets is “to legally protect at least 30% of the land, including inland waters (..) of which at least one third (10% of the land) to be under strict protection”. Various natural habitats may be included in the protected areas of concern. One of them is rivers. Rivers are parts of many protected areas, but may they benefit from strict protection?

On 22 June 2022, the European Commission adopted the proposal for a Nature Restoration Law (NRL), a key element of the EU Biodiversity Strategy. The regulation establishes a framework within each Member States will implement, without delay, effective area-based restoration measures that will cover, by 2030, at least 20% of the EU's territory and marine areas, and by 2050 - all ecosystems in need of restoration. One of the targets is the freshwater ecosystems. How the Baltic Sea and European countries are preparing themselves for this game changer? This workshop aim was to support these preparations. The implementation of the NRL will be a huge challenge; in some countries of the Baltic Sea Region even 92% of river surface water bodies need restoration, mainly lateral!

The workshop, as the Natura2000 biogeographical networking event, had discussions directly linked with the “10% of strict protection target” and helped experts better submit rivers to the national pledges in the biogeographic process. Also, it was linked with “25k km of free-flowing rivers restored” target (part of them may be restored by natural processes under strict protection; others may be one-off restored and then left to natural processes as strictly protected). The workshop concerned continental and boreal biogeographical regions and the importance of the Baltic Sea basin.

All **presentations** with relevant content are included on CCBs website: <https://www.ccb.se/event/2023-april-workshop-ccb-rivers>. **Agenda** is visible on p.22 of this summary report.

**The contact person is Ewa Leś, initiator and organizer of the workshop from CCBs side.**

Onsite and online participants represented European and Baltic Sea region countries and diverse range of sectors: institutions, organisations, consulting, national parks, administrative units, water authorities, science – see below.

Participants of this workshop: onsite & online

Estonia Lithuania  
Sweden Finland  
**EU WHO IS HERE?**  
Italy Latvia Germany  
Croatia USA Ireland Poland

- European Commission
- County administrative board of Jämtland, Sweden
- Maritime Institute, Gdynia Maritime University, Poland
- Drawa National Park, Poland
- ClientEarth, Poland
- Latvian Nature Conservation Agency
- the County Administrative Board of Västerbotten, Sweden
- WWF Poland
- European Regional Centre for Ecohydrology, Poland
- Swedish Agency for Marine and Water Management
- Słowiński National Park, Poland
- MKO Environmental and Planning Consultants, Ireland
- Wrocław University, Poland
- General Directorate for Environmental Protection, Poland
- Finnish Environment Institute (Syke)
- Coalition Clean Baltic, Baltic Sea region
- Rewilding Oder Delta, Germany
- Polish Waters - National Water Management Authority
- WWF Germany
- Estonian Environmental Board
- Naturalists Club, Poland
- University of Latvia
- University of Massachusetts Amherst, USA
- Ministry of Environment of the Republic of Lithuania
- University of Zagreb
- Regional Environmental Center, REC Poland



We, the April workshop's team and Drawa river (photo from Przemek Nawrocki archive)

## PLANNED RESULTS of the workshop:

- ~ Exchange of knowledge on the topic of strict protection of rivers in the EU, NRL implementation around the Baltic and in Europe; 😊
- ~ Supporting the NRL implementation and the biogeographical process; 😊
- ~ Feeding the process of discussion of the national pledges for the protected areas; 😊
- ~ Input to the development of national restoration plans; 😊 (depend on further use our content by participants)
- ~ A good example of river protection during a field trip; 😊
- ~ Final pithy report possible to use wider, develop a draft of criteria of designation of rivers and river valleys as strictly protected areas. 😊

## II DAY OF THE WORKSHOP – outcomes of general discussion on prepared questions. “Actions proposed” are brainstorming output.

### When and where the natural fluvial and ecological processes may fully maintain the river’s natural values, and the “non-intervention approach” is the best choice for river habitat maintenance? When and where is it not?

- Self- sustaining river should be (almost) always the ultimate goal. The objective of the river management should be to restore and to shape natural fluvial and ecological processes, to allow them fully maintain the river natural values and to maintain the river in expected shape and dynamic.  
This is not only objective for the “nature conservation islands” but generally for all rivers. Each river, even altered, is a dynamic geocosystem, where natural fluvial and ecological processes act. Taking them into consideration and attempt to use them as part of river management is simply a part of wise river management.
- If we need to leave rivers for natural development we need to restore the natural processes, lateral & longitudinal connectivity, otherwise, the goal won't be achieved. The natural processes in their prior condition, before human activity entered the river.
- There is important how the river looked like in natural conditions or to learn how it looked if this is not known, how the natural ecosystem should look like – reference condition for the rivers. 25 river types (criteria to fit in) are helpful here – high-quality rivers (Latvia). The reference condition is a natural and undisturbed, high-quality river. A potential issue with this is there may not be suitable existing reference conditions for some or all river types due to the extensive land use that has taken place over the decades and centuries. This makes the ‘reference condition’ possibly unreliable for this purpose as described. Modelling may be a reasonable solution. In cases where there is extensive built environment, other land use, or direct use of the water resource within the vicinity of a river (river section) of conservation interest, it may well be impossible to achieve a near-natural state.

- To define the size limit is important – large EU rivers are all changed by human hand already, they are far away from undisturbed but are relatively natural in some sections; so the process of strict protection could be used only for small rivers and streams (or sections of larger rivers).  
Taking a site-specific approach may be beneficial as biogeographical and ecological differences, economics, social values, etc. will vary from community to community, country to country. Flexibility would be advantageous. Prioritizing the strict protection of headwaters and lower order streams while supplementing with the protection of sections of larger order rivers may have benefits ecologically, and would also be dependent on the extent of the existing pressures.
- When assessing river value:
  - it is important to specify the type of value we associate with a river (reach), be that "non-existence" or some "use value" (even if indirect like a regulation service): the criteria to assess river suitability for that value are indeed different (a different "value tree").
  - when the non-use value is concerned, we should recognize that in addition to the health criterion (adopted by the WFD), also "peculiarity" counts (i.e. "how special it is")
  - the "biota centric" WFD paradigm - together with the inclusion of HyMo quality only for biological good status water bodies - can lead to undesirable consequences: e.g. blindness to morphological impacting actions ("the road") or vice versa invisibility of positive effects of a river continuity improvement policy
  - the One Out All Out (or worst case) scoring criterion adopted by the WFD is unfair and internally inconsistent, potentially leading to mistakes
- The choice: what we will choose to restore, not everything is possible; the natural processes are the most important. To start with what is protected already seems to be a good choice in case of efficiency and economy. We need to restore natural processes in chosen sites which are less disturbed, to support existing species so the habitat may improve by itself. It's rather not possible when the river/site is heavily disrupted.
- A non-intervention approach could not be used in these rivers/protected areas, where it could negatively affect the main natural values of the river, that is needed to be protected. For example, rivers with populations of pearl mussels *Margaritifera margaritifera*, are one of them where non-intervention approach is not possible, at least in Latvia. Negative impact of beaver activity should be eliminated in such rivers. As freshwater mussels require clean oligotrophic flowing water, appropriate habitats for them could be heavily affected by beaver activities such as damming - beavers are a threat to the pearl mussel population. This is just one example, specific to Latvia, but it is possible that there are more examples in other EU member states.  
Another situation could be with modified rivers - that are made straighter and deeper. In those rivers maybe river restoration is needed, and then, when the river is fully recovered, river could sustain itself. But these also are cases, when river needs some help.
- Wastewater management to look at (settlements along the river) – the main source of nutrients; cooperation between local stakeholders to have it working properly, not disturbing the riverine ecosystem, is needed. Wastewater is a problem in all our countries, including pharmaceuticals' impact on the environment and biodiversity.  
Improved civil services and other related infrastructure are a must, where these are currently lacking. Also, public education is key to influencing human behaviour around the natural environment and ecosystem services.

- Question to rethink: what will be the impact of our success in restoration and protecting rivers in the surrounding area? What would happen if we will block ditches for water retention, will it be left enough water in rivers? Perhaps it's worth considering the change system into irrigation and letting the water soak into the soil. Modelling allows us to see the expected results of landscape retention. Risk example: 1) Biebrza River in PL has spring floods and blocking the ditch system may lower the water level so the river may receive less water potentially; 2) in more natural conditions, there would be no sand islands on the Vistula River, important for biodiversity, so that may happen in case of successful river restoration. Impact of the success of the restoration to think of. Shifts in ecosystem function and changes to micro & macro habitats will be inevitable. We know this and are also motivated by it. Community metrics and other analytics can demonstrate there are changes occurring as a result of restoration/protection measures taken - this is achieved through biomonitoring practices with baseline information. A holistic approach in an attempt to predict such changes (e.g. through modelling) may be useful to help inform the best restoration/protection approaches. The ability to first predict and later quantify changes in species diversity, abundance, biomass, and energy transfer in trophic levels are important baseline parameters. If the net gain is greater than the net loss, arguably, the goal to enhance/restore biodiversity has been achieved, despite changes in community composition.
- Lack of knowledge, relevant expert, expertise and experience causes the problem (how to properly use natural processes for river maintenance and restoration? In particular, lack of experts and updated knowledge in local melioration & drainage units (for example Germany, Poland).

#### ACTIONS PROPOSED:

- ✓ Rethink environmental objectives of Water Framework Directive. Restored or maintained fluvial end ecological processes should be a part of the objective, parallel to biotic elements;
- ✓ Until above is achieved, fully explore the hydromorphology (including their dynamic, fluvial processes) as quality element, usually responsible for ecological status of biotic elements). Guidelines at EU-level would be welcomed.
- ✓ Clarification or amendment of WFD Annex V, concerning hydromorphological quality elements for rivers. Fluvial processes should be explicit mentioned here. Connectivity of river with the floodplain should be more accented.
- ✓ In Natura 2000, fully explore the importance of river fluvial processes as key integrity factor for river-dependent Natura 2000 sites and as a basic feature of river natural habitats. Guidelines at EU-level would be welcomed.
- ✓ Training on good practices of rivers maintenance and restoration, melioration and drainage. The Polish "Catalogue of good practices of river maintenance" may be promoted as one of good examples.
- ✓ Experience exchange between EU member states - both on question about where we use and where we don't use non - intervention approach, as well as management practices.



Exploring natural values of Drawa National Park rivers (Nancy's Wolf archive)

### How does strict protection of the neighbourhood ecosystems (forest, wetlands) may impact the river ecosystem and influence river restoration?

- Key factor is what we want to protect and how wide, what are the values - the river and wetland restoration need space.
- Important to protect the river neighbourhood as well (riparian zone), not only the channel of the river – complex restoration; protection should be implemented after the restoration not before to ensure a cost-effective and possible mechanism, e.g. to go with restoration activities around protected areas is not possible sometimes. Restoration as a holistic process, river with riparian zone, protection belt, underground water. Always consider legislation when considering the holistic protection of rivers.
- Recognize the threats (and solutions): e.g. forestry is a major threat to rivers in Sweden, the rivers need to be considered for nature reserves but not as in Latvia; in Latvia strict zones are established across the rivers where the clear-cuts are forbidden - protection belt/zone on Daugava river when you need to have a permit for it (legislation). Forestry in the PL mountains is an underestimated threat to rivers – even more than chemical pollution, sediments from mechanical works are silent killers to riverine life, also the machines can drag the trees in the stream ruining the ecosystem (barbaric habitat). Another major threat to rivers is agriculture with its nutrients flowing to the rivers and to the Baltic Sea. In Latvia (perhaps also in other countries) a huge problem related to agriculture is with protective belts around the rivers - they are not respected and lands often are cultivated up to the very bank of the river. And it leads to more nutrients and sedimentation inflow in rivers.

- Light pollution significance due to its influence on fish reproduction; e.g. Croatia in 2019 passed a law restricting lighting levels.
- Riparian areas (e.g. wetland habitat types) are not separate from the river ecosystem. Can we consider these semi-aquatic habitats along with the aquatic habitats of rivers in management planning? With this in mind, resource management practices would need to be integrated with river restoration and protection policies. Riparian buffer zones as a mitigation measure, for example.
- Forest is important for river. Appropriate management of forest riparian zone should guarantee relevant input of deadwood (incl. dead trees) to the river. Strictly protected forest on river banks usually works well. Thus, the protected area model composed of strictly protected river with strictly protected forest around should be highly recommended. At least narrow forest belts (50-100m) along river banks should be excluded from usual forest management and managed as river-protective zones (strict protection i.e. non-intervention management of such forest belts is usually the most appropriate, at least until they are not composed of alien tree species).
- Preserving or restoring river is always a multiobjective issue: this fact should be recognized and addressed looking explicitly for transparent trade-offs through a rational, participatory decision process. This calls in turn the need to measure objectives (the Value Function technique, jointly with a proper specification of the value tree, can support this difficult task, even when spatial /temporal aggregations are involved). And also calls for integrating different plans (or directives), like WFD and FloodD which still in practice operate separately generating conflicts.
- IAS on river banks may be a problem. River banks are usually IAS sensitive (for example for *Impatiens glandulifera*, *Acer negundo*), this in some cases must be managed, not strictly protected.

#### ACTIONS PROPOSED:

- ✓ Stop nutrients input from agriculture. Promote wetlands buffer zones (and trees + shrubs + herbs belts as protective zones, if there are no conditions for wetlands management. The zones should be:
  - wide enough (>10m of non-managed vegetation, 30-50m of forest % shrubs belt, 50-100 m of grasslands);
  - non-managed (spontanic development of vegetation with exception for IAS management only) or very extensively managed (i.e. extensive grasslands, but then must be wider than non-managed vegetation belts)
  - supported by precisely offered and high enough incentives provided by CAP.

The measure should be included to CAP-measures, with the requirements précised above.
- ✓ Use of buffer zones also to help regulate natural sedimentation processes. Reduce or prevent anthropogenic erosion, and fine sediment loading. The measure should be included to CAP-measures.
- ✓ Improvements in legislation that if there is a protected habitat of EU level in river, then also some part of the river bank is under some protection with higher requirements for river protection.



- ✓ Promote strict protection (non-intervention management) of forests along river banks. May be implemented by:
  - guidelines for HD implementation, promoting non-intervention management of riparian natural habitats (91E0, 91F0 habitats);
  - guidelines for HD implementation, promoting non-intervention management of river banks vegetation as one of conservation measures for river biotic elements (fish, mussels);
  - guidelines for WFD implementation promoting appropriate management (incl. non-intervention management) of riparian zones and clarifying the concept: *structure and condition of the riparian zones correspond totally or nearly totally to undisturbed conditions.*
- ✓ Experience exchange between EU member states, concerning rivers in strictly protected areas (ecology, relationships with the neighbourhood ecosystems, habitat dynamics following fluvial processes; management experience).



Exploring Drawa National Park with the NP permit (photo: Nancy Wolf, Ewa Leś)



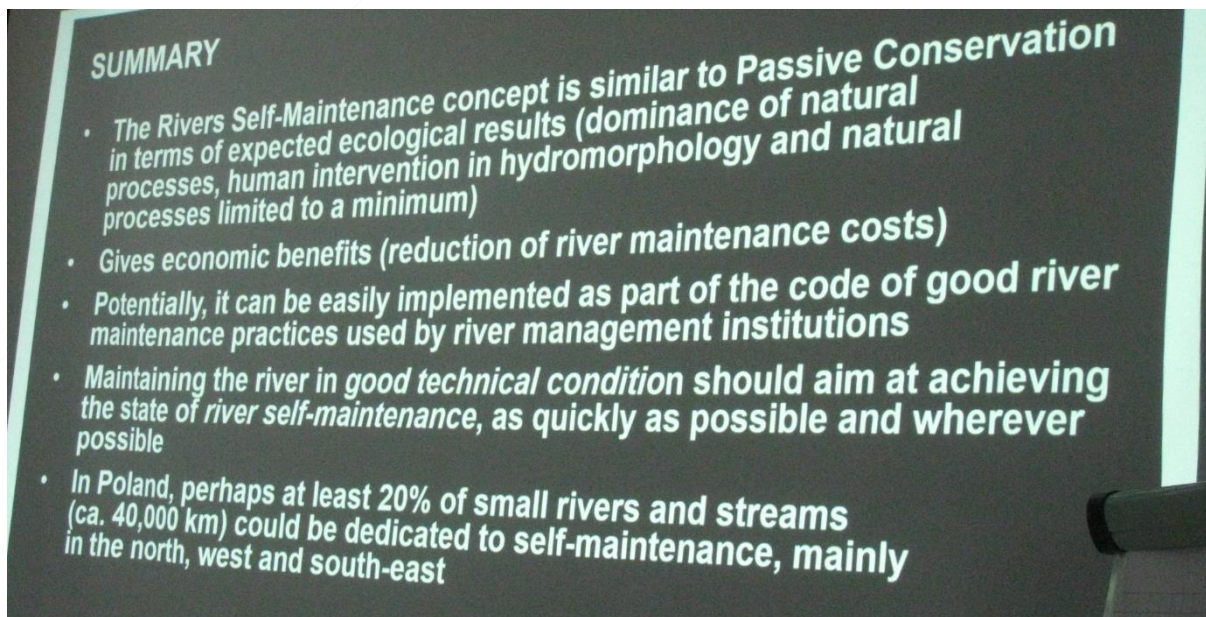
**When and where natural processes may successfully restore rivers? Is transforming an altered river into a “free-flowing one” feasible? Under what conditions?**

- Geomorphic character and behaviour (together with hydrology) are the basis to address a river problem
- High-energy rivers (in particular montane and submontane ones) have bigger potential of restoration by natural processes only. High-energy episodes on high-energy rivers (including floods) are often followed by rapid restoration of some river structures.
- If the river is straightened, at some point the river can restore by itself, but it depends on the river's energy. Sometimes some artificial, external initiation of the process may be needed. Most significant progress in self-restoration is provided by high-energy episodes (e.g. floods) on high-energy rivers (mountain rivers), but flood damages need to be accepted as a restoration process then. Also in lowland areas, rivers with faster flow recover faster. But there are also many examples when slowly flowing rivers are recovered by themselves.

**ACTIONS PROPOSED:**

- ✓ Guidance of rivers self-restoration, explaining in particular:
  - how to recognise and assess river self-restoration potential;
  - how to enhance, not diminish this potential during every-day river management and river maintenance;

- how to prepare river neighbourhood for “river self-restoration episodes” (land ownership along the river, incentives and compensations for landowners affected by river self-restoration; “sleeping reinforcements” to secure significant human facilities etc.)
- ✓ Paradigm change: considering floods as restoration opportunity, not as a threat only. Calculating and managing not only the *flood risk*, but rather *flood risk and opportunity*. Relevant guidance for Flood.



Slaid from the presentation of Przemek Nawrocki

**Maybe “one-off” restoration, and then leaving the river to natural processes is the appropriate solution?**

- Despite some restrictions presented below, the general answer is YES, at least in many (not all) cases.
- Depending on the size of the river restoration – section might be too small?
- One-off restoration: restorative intervention and leaving; Another approach is sometimes to make restoration and continue to maintain the restoration - is it still the restoration if they don't maintain natural function? It depends on the size or section of the river.
- Spectacular removal of huge dams by an explosion when sediments can travel and rebuild the delta - it helps in spreading the important riverine sediments; new dams have a system of relocating sediments – devices for transporting systems, e.g. in Germany and Austria – feeding the rivers with sediments.
- Although risk management is traditionally one of the worst enemies of a good ecological status, climate changes obliges us to switch to a new nature-based paradigm and hence undertake serious, large scale restoration actions: much more space to river, change of land use, transformation of urban territory into "hydro-cities", administrative management mechanisms to govern transition and the new situation. The recent dramatic facts in Emilia-Romagna (Italy, May 2023) are convincing many institutional people (but yet not enough).

## ACTIONS PROPOSED:

- ✓ In national pleas, Member States should assess not only the foreseen *establishing of strict protection*, but also (as a part of) *establishing of strict protection after one-off restoration*.

## Is transforming an altered river into a “free-flowing one” feasible?

- It is definitely feasible. In some cases rivers could recover by themselves (non - intervention approach is applicable), but in some cases - specific management activities should be taken.
- All 4 dimensions of free-flowing rivers are important, and the step of raising the bottom of the river as the significant one in the whole process.
- Good understanding of *connectivity* and *barrier* concepts is very important. all stakeholders must be fully aware that *barriers* means not only infrastructural barrier facilities. River too deep due to consecutive removing sediments or due to blocking bank erosion above may also be a barrier in lateral connectivity.

## ACTIONS PROPOSED:

- ✓ Update of Guidance on Barrier Removal for River Restoration by more example of barriers which should be removed, including some non-evident examples, as non-infrastructural barriers.
- ✓ More ambitious and more clear target of restoring free-flowing rivers:
  - Clear, binding and more ambitious national targets (at least 15% of rivers),
  - Clear, binding criteria of counting rivers or river sections towards the “free flowing river target”. All 4 connectivity aspects must be achieved to count river towards the target.

Fish-pass,  
element of  
awarded  
LIFEDrawaPL  
project:

[link1](#), [link2](#)

(Photo: Jarosław  
Gancarczyk)



**What level of human use of rivers, if any, is compatible with the strict protection idea, i.e. without interfering significantly with natural processes?**

- There is no common feeling & understanding that 1) rivers need to be protected and 2) how the healthy river looks like, in particular:
  - healthy river must have lateral connectivity i.e. sometimes need to flow also outside the river bed and flood adjacent areas!
  - healthy river need sediments, for this it must erode the banks
  - healthy river needs dead wood inside, dead wood should not be removed - it needs an appropriate amount of dead wood inside. For example, if the river is small and dead wood makes wood debris, that completely blocks the flow, it is not suitable habitat for reophile organisms any more. E.g. in Sweden rivers have rocky bottoms, and the problem is too less sediments and too less dead wood in rivers, which is a bad situation. In Latvia, a lowland country, the situation is the opposite - sometimes there are too much sediments and too much dead wood, that makes a negative impact on river rapids (riffles). Our goal is the same - a healthy river with diverse structures within it, but we have different natural conditions and therefore management activities to reach this goal.
- N2000 seems to be a good scheme for the protection of rivers. Nevertheless, some of them need to be strictly protected, which must be understood as much more restrictive.
- Strict protection should exclude water abstraction, sewage disposal. as well as banks reinforcement, regulation facilities, flood prevention (but allows flood restoration, as restoring lateral connectivity). Limited and managed canoeing and angling may be considered as coherent, until limited and managed indeed (see next point)
- What intervention is possible in free-flowing rivers depends if we think about the whole or section of the river. You need to know conservation values and threats, before starting n2k objectives – this is good because the nature reserves are not good enough.
- Limitations of access to rivers seem to be a good example in Drawa National Park but adaptive management would be an advantage, e.g. in Sweden on a few rivers there are very few visitors, but another river is visited by thousands of people fishing. Also, it needs to be taken into account that peoples' presence intensity changes – adaptive management of protected areas, being aware of the changes (monitoring) and being able to react & adjust. Rivers vary so one scheme for all is not a good approach. The conservation values are the point to start – e.g. most rivers are not protected in Sweden at all, with no restrictions on river use, because the forestry regulations protect the area, despite river regulations being implemented (water is not strictly protected). Nature protection is being run by foresters but not for the purpose of river protection.
- Human influence would be difficult (impossible?) to fully eliminate. Examine the traditional existing uses and question possible modifications such as seasonal management practices (e.g. as seen with seasonal recreation use on the Drawa), also integration of nature-based solutions (adaptation of planning policies; industry/resource management practices, etc.) where proximity to rivers is unavoidable. Adaptive management as mentioned above, as well as taking a local approach to account for social/economic values. Can we lessen the gradient between unprotected and strictly protected in favour of biodiversity?

## ACTIONS PROPOSED:

- ✓ Promoting common feeling & understanding that rivers need to be protected – and what it means in practice. Promotion of acceptance of flood episodes, river banks erosion etc. Involving society in river management activities. Good practices guidance and experience exchange.
- ✓ Clarification guidance of “strict protection” understanding in various kinds of ecosystems (rather narrow, not wide approach should be applied – strict protection should be commonly understood as allowing natural processes and limiting human interventions; not as a human intervention, even with good intention).



We have visited precious rivers of Drawa National Park – Drawa and Płociczna (photo by Nancy Wolf)

## What is the pressure of canoeing, angling, etc. and how the pressure may be managed and controlled?

- Sweden: fishing management plan worked out by 40 units is difficult
- Latvia: one river used for canoeing with infrastructure built, but smaller/tributaries are protected – it's a salmon river;
- Angling: the importance of biosecurity, not stocking but depending on natural native material; either good angling management or forbidden at all for some time + education for anglers

- Also, how the river can sustain self–population? Catch & release should have strict rules depending on the capacity of the river. If we have a self-sustained population in the natural habitat, it will recover from angling pressure. Also, the knowledge of native species' presence is significant. Education amongst anglers would be a good step.
- Issues: mismanagement by humans, troubles with beavers and their dams etc. Therefore nature goals should be revised from time to time, not being legislation forever.
- Catch&release is not predictable about fish survival so not as good as presented.
- Poland: Sometimes it is easier to manage anglers' pressure but not the canoeing – the law provides everyone free access to flowing waters. Also, private land owners modify some parts of rivers, e.g. for canoe development which is more problematic for rivers. This sport also interferes with spawning behaviours and nesting fish. In protected areas canoeing is not allowed in most cases. The only solution is to create a nature reserve or protected area. Other rivers are free to access. In theory commercial activity needs a water permit but in practice, it doesn't work. More attention to this legislation option would be advised, e.g. developing kayaking business should pass the procedure of environmental impact assessment. Changing and better-use legislation would be in place.
- Latvia: project on angling and inventory of invasive species of fish is an example of useful cooperation with anglers.
- Poland: usually no fishing/angling is allowed within the natural reserves, there are some exceptions in terms of angling NGO cooperating with the Environmental Agency to protect the area and collecting scientific data.
- Lack of EIA might be a violation of proper implementation of environmental directives – kayaking should be on the list of activities potentially negatively impacting the environment; dredging of rivers was not included on the such list as well (!) – it was blocked by political reasons. We suggest returning to this issue – EIA as a legal tool.
- However, we need to bear in mind the capacity of administration-capability of processing all requests - balancing the capacity of water authorities.
- Climate change is another aspect in this context: angling in too high water temperature, even C&R might be killing so introducing good practices of angling (measurements of water temp.) is proposed.

#### ACTIONS PROPOSED:

- ✓ We need some reference rivers with canoeing, angling and other human activities excluded. Reference points for impact assessment on other rivers.
- ✓ Canoeing and angling regulations in Natura 2000 sites should be a subject of appropriate impact assessment. Guidance remembering this issue!
- ✓ Checking national regulations (is impact assessment of canoeing, angling and other kinds of recreational activities guaranteed? Can such activities be managed / limited if necessary?).
- ✓ Canoeing, in particular in protected areas, may be limited also by soft measures, as ban for removing dead trees crossing the river, lack of infrastructure.
- ✓ Change in canoeing business to more sustainable: education?

## When protected areas require priority removing lateral and longitudinal barriers?

- Protected areas should be priority comparing to other country, because there concentrate more nature values.
- It depends on the main protection target: if we want to protect /make protected the natural resources then barrier removals are always needed.
- If we want to keep only some part of the habitat then may be difficult to water regime of the whole river, to remove some barriers. If it is a river and pearl mussels are present in but there is a barrier as well, then we need to make a priority to remove it. Where we have less impacted ecosystems with valuable species – then actions should be focussed on protection and barrier removal; no need to protect sites heavily affected.
- Latvia: set of projects example on prioritization of rivers and dam removal - inventory of all obstacles, prioritization according to impact on fish resources (existing vs possible), list of top 70 obstacles to whom financing for removal could be possible. In LIFE IP GOODWATER also the methodology of assessing social-economical-environmental impact will be developed, it also will allow to compare different obstacles and make decisions. But also prioritization for lateral connectivity should be done.
- Polish attempt to establishing environmental objectives:
  - Table of “standard water requirements” of all habitats and species of European concern;
  - Meeting of “standard water requirements” for relevant habitats and species is the environmental objective for Natura 2000 site designated for them.
  - Longitudinal connectivity is generally required for all Annex II fish species – minimal length of river section without significant barrier as well as maximal height of the transversal barrier is established, specific for each species;
  - “Flood objective” established for areas protecting alluvial forest, i.e. minimal frequency of flooding of area outside river bed.

The National Programme of Surface Waters Restoration (NPSWR) proposes appropriate measures to achieve such objectives. However, the NPSWR was not fully transferred to RBMPs, thus achieving of environmental objectives for protected areas is not safe.

## ACTIONS PROPOSED:

- ✓ More exchange of good practices concerning establishing environmental objectives for protected areas and proposing measures for achieving these objectives.

## What are the criteria for the designation of rivers and river valleys for strict protection?

- Protection of pristine conditions where they exist.
- Presently free-flowing rivers, without significant human alterations.
- Slightly-altered rivers, able to self-restoration.
- Rivers feasible for self-maintenance after one-off restoration.
- Protection of rare species; protection of species of conservation concern
- Preservation of genetic diversity.



- Areas of protection of habitats that are foundational for ecosystem services (e.g. wetlands for flood risk management; surface and groundwater quality).
- Areas of protection of habitats with greater, more complex natural processes to support multi-species habitats, enhancement of diversity and abundance, lead to improved quality in adjacent areas and 'spill-over effects' for species

#### ACTIONS PROPOSED:

- ✓ To apply as above.

### III DAY OF THE WORKSHOP – brainstorming on prepared topics

- A. **Biodiversity Strategy 2030 target is to legally protect at least 30% of the land, including inland waters, and 30% of the sea in the EU, of which at least one-third (10% of land and 10% of sea) to be under strict protection.**

**Strictly protected areas** are fully and legally protected areas designated to conserve and/or restore the integrity of biodiversity-rich natural areas with their underlying ecological structure and supporting natural environmental processes. Natural processes are therefore left essentially undisturbed from human pressures and threats to the site's overall ecological structure and functioning, independently of whether those pressures and threats are located inside or outside the strictly protected area

How to:

- upgrade protective rules of existing protected areas to meet this definition?
- or find new areas suitable to designation according to this definition?

What would you recommend to your government?

- New financial mechanism for local government (competitive instrument attractive incentive supporting existence of the protected areas in local community area)
- Common definitions are needed on the EU level, binding for Member States; common understanding what we would like to achieve.
- Spatial (territorial) planning importance – not allowing to make the wrong plans, devastating for riverine habitats, blocking further protected areas designation
- Revision of conservation objectives of already existing NPA (national parks, landscape parks) – more including of strict conservation objectives.
- Upgrade to strict protection existing protected areas: in particular ecologically most valuable rivers - high habitat status according to Habitats directive, high ecological status (reference Water Bodies for Water Framework Directive,) rivers with highly sensitive species like pearl mussels *M.margaritifera*, maybe also salmonid rivers.

- Establishment of new river nature reserves/river strict protection zones. Designate new protected areas with primary conservation targets on lakes and rivers. New reserves on 'low conflict areas' first. Ensuring good planning tools.
- Upgrade strict protection rules: define target values of all 4 dimensions of free-flowing rivers in laws and regulations
- Develop & implement a control system for retaining existing regulations
- Create mechanisms to support implementation: administration work for restoration work, increase administration duties, which can exclude harmful projects affecting waters
- Empower communities & governmental agencies to act e.g. by money/resources tied to a specific task
- Solve conflicting legislations e.g. CAP and nature protection law regarding rewetting
- Create practical functioning alternatives for farmers or good offers for compensation (land access)
- Corridors of migration between strictly protected areas
- Connect many small strictly protected areas (+ stepping stones)
- Think and ensure of resources needed: e.g. green infrastructure - connectivity
- Raise awareness of the need for rivers protection

**B. Nature Restoration Law proposes restoration of natural connectivity of rivers and natural functions of floodplains to contribute to:**

- ... the targets for riverine habitats & ecosystems under Article 4
- ... the objective of restoring at least 25 000 km of free-flowing rivers in the EU by 2030

Components of the exercise are

- Inventory of barriers
- Identification of barriers to be removed
- MS plan and timetable set out in national restoration plan
- Other measures to complement removal

How to identify non-transversal barriers?

How to select rivers (rivers sections?) for contribution to free-flowing target?

### 1) General approach: entire river from source to sea (S2S) or river sections only?

~ need to be clarified at EU level: how the target should be interpreted?

~ if river sections would be also accepted towards the target, they cannot be too small (entire water body as minimum?), to avoid deteriorating of the target ambition by counting a lot of very short (i.e. not requiring significant restoration effort) sections.

~ start to find the undisturbed section of the river and check if its protected or not;

~ check what can be used as a proxy of the undisturbed river ecosystem;

~ restoring S2S seem problematic – too many settlements on rivers are present nowadays therefore we need to be realistic – how long the free-flowing section needs to be is the question;

~ perhaps would be worthy to look from the smaller rivers perspective – from the outside to the inside of the catchment;

#### Priorities:

- ~ HD&WFD: habitats and species; good ecological status
- ~ Meanders
- ~ Flood space (polders, wide valleys)
- ~ Potential connectivity of river with oxbows

### **2) Longitudinal connectivity barriers (dams, HPP)**

- ~ with worst impact for nature (higher fish indexes) – migratory and HD fish species
- ~ in protected areas or with an impact on habitats on them;
- ~ with valuable species (pearl mussels, salmonids fish, Natura 2000 fish species).

To note: do not forget small barriers on small streams (road culverts); some Natura 2000 fish species have strong requirements for habitat connectivity - they are not able to pass the barriers passable for trouts → thus, we need to restore connectivity using the stringent requirements of the species in concern

### **3) Lateral connectivity barriers**

- ~ in protected areas (or potential areas)
- ~ with protected EU habitats around them: alluvial forests, floodplain meadows

To note: the barriers are not necessary infrastructure facilities. Too deep a river bed (due to consecutive dredging and sediments removal) is also the lateral barrier preventing valley flooding and should also be restored. Sediments deposits along the river banks could also be a barrier.

### **4) Potential habitats**

- ~ status close to good – possibility to become good status
- ~ connected to good or high-quality habitat

### **5) Start with the small ones**

Catchment scale: work from the outside to inside (more effective + avoids measurements blocking each other)

### **6) Start with low-conflict areas (to save time & money) + low-threat-areas**

Selection according to remnant populations of European eel (*Anguilla Anguilla*), Huchen (*Hucho bucho*), Salmon (*Salmo salar*), *Acipneseridae* (sturgeons), Lampreys (*Lampetra sp.*)

### **7) Remove barriers not only to achieve free-flowing river**

Barriers need to also be removed (or mitigated, for example by fish passes) on the migration corridor of migratory fish species. This not necessarily will be followed by fully restoring of free flowing status and then will not be counted towards free-flowing river target, but is also necessary and significant.

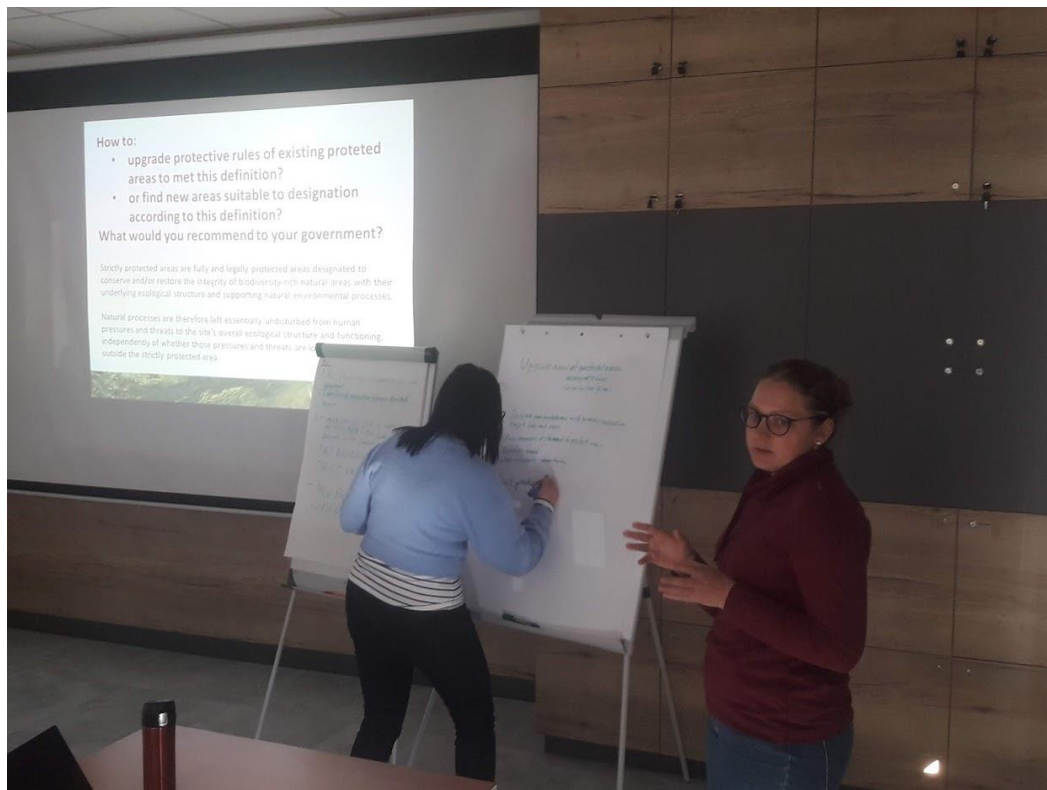
**8) Aim for all free-flowing rivers requirements for upper parts of the river (spawning grounds)**

Nett effect: restored natural processes fully or partially and restoring self-sustainable migratory fish populations

**9) Need of gaining data on flood danger after the destruction of the barriers**

**10) Data to use:**

- lateral – vertical barriers = modified rivers (more straight & deep) - digitally available melioration information maps – e.g. 1/3 of river total length in Latvia could be removed);
- lateral barriers = polders/dams in flood areas - digitally available RBMP, e.g. could not be removed because of flood danger for cities;
- crop flood compensations from government – use to identify the territories and calculate the importance;
- ice movement in rivers – when problem in flow there can be problem with barriers?
- dikes, roads/railroads, ‘dredging lips’;
- flood risk maps (incised river) + SENTINEL open water flood (are the valley, at least sometimes, flooded – if no, probably we have a barrier for lateral connectivity);
- groundwater depression zones (mining, agriculture, water abstraction);
- citizen science ‘river discoverers’ (seasonality of stream, water peaking info (downstream of HPP) is the river as good as it looks like? Check it out!
- database or civil engineering structures stopping flooding;
- collected data on the underground water level.



Indoor brainstorming (photo by Ewa Leś)



We and natural river meander behind us (photo by Przemek Nawrocki)

**Let's remember about source-to-sea approach.**

**Good ecological status (GES) in the Baltic Sea is strongly dependent on  
GES of the rivers in the catchment! 🌊**

# NATURAL RIVER PROCESSES AS A BASE FOR RIVER-RELATED PROTECTED AREAS & RIVER RESTORATION

*Expert workshop*

April 20  
2023

to

April 22  
2023



2024

# AGENDA DAY 1



Also available for  
online participants

Time in CET

## 12:00-14:00 - INTRODUCTORY PRESENTATIONS

**12:00-12:10 Ewa Leś, Coalition Clean Baltic, River University founder:**  
Introduction to the workshop, its aim and expected results

FACEBOOK

**LIVE 12:10-12:35 Przemysław Ogiński, European Commission:** Where we are and where we need to be with our rivers? Biodiversity Strategy targets, Nature Restoration Law and expected steps in Biogeographical Process

FACEBOOK

**LIVE 12:35-13:00 Andrea Nardini, civil engineer, PhD in System Analysis and Fluvial geomorphology:** "Risk management under climate change as serious support Restoration" (*lecturer online*)

**13:00-13:25 Tobias Schaefer, WWF Germany:** Legal Protection of Free-Flowing Rivers. The need for strict site protection in the context of freshwater ecosystems

**13:25-13:50 Przemysław Nawrocki, WWF Poland:** Rivers self-maintenance concept

**13:50-14:15 Marina Piria, University of Zagreb:** Is recreational fishing compatible with strict site protection?

## 14:15-15:00 - LUNCH

## 15:00-18:30 - PRESENTATIONS CASE STUDIES / PROJECTS

**Presentations related to the subject ("grassroot experience"):**

**SWEDEN:** the County Administrative Board of Västerbotten

- **15:00-15:20** Mattias Sundqvist, Ecostreams For Life project - Ecosystem-based restoration and management of boreal rivers;
- **15:20-15:40** Elin Götzmann, Rivers Of Life project - Restoration for Improved Resilience, Biodiversity and Status in Boreal Rivers

**GERMANY:** Rewilding Oder Delta

- **15:45-16:10** Nancy Wolf

**ESTONIA:** The Environmental Board

- **16:10-16:35** Kaja Lotman: ecosystem management experience of last years in Estonian protected areas (*lecturer online*)

**POLAND:**

- **16:35-16:55** Paweł Pawlaczyk, Klub Przyrodników - Drawa National Park, Drawa & Płociczna rivers as examples of passive protection of rivers
- **16:55-17:15** TBC - Passive protection of rivers within the Polish National Programme of surface waters restoration

**LATVIA:** Nature Conservation Agency

- **17:20-17:40** Lauma Vizule: Kahovska: Harmonization of BD and WFD implementation processes in Latvia
- **17:40-18:00** Zanda Segliņa: Implementation of Biodiversity strategy for 2030 in Latvia

**18:05 Discussion**

## 18:30-20:00 - DINNER

*Dinner costs are on the charge of the participants*

21/04

# AGENDA DAY 2

Time in CET

9:00-10:00 - INTRODUCTION TO FIELD TRIP

**Aleksandra Gancarczyk, Drawa National Park:** Introduction to field trip - Drawa National Park as river-protecting national park in Poland

10:00-16:00 - FIELD TRIP

**Aleksandra Gancarczyk, Drawa and Plociczna rivers in Drawa National Park, Poland:** impression of strictly protected rivers

FIELD LUNCH - DURING THE TRIP

17:00 -18:00 - CREATIVE BRAINSTORMING:  
QUESTIONS TO BE ANSWERED

18:15 - JOINT DINNER



22/04

# AGENDA DAY 3

Time in CET

9:00-12:00 - GROUP WORK SESSIONS

12:00-13:00 - FINAL DISCUSSION & CLOSING SESSION  
OUR HOMEWORK-REPORT FRAMEWORK

13:00-14:00 - LUNCH

WE IMPATIENTLY WAIT TO MEET YOU AT DRAWA NATIONAL PARK!